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10/383,272 7 March 2003 (07.03.2003) US</p> <p>(71) Applicant (for all designated States except US): ANGUS CHEMICAL COMPANY [US/US]; 1500 East Lake Cook Road, Buffalo Grove, IL 60089 (US).</p> <p>(72) Inventor; and</p> <p>(75) Inventor/Applicant (for US only): SWEDO, Raymond, J. [US/US]; 924-A Boxwood Drive, Mt. Prospect, Mt. Prospect, IL 60056 (US).</p> <p>(74) Agent: DRAKE, James, J.; The Dow Chemical Company, Intellectual Property, P.O. Box 1967, Midland, MI 48641-1967 (US).</p> | <p>(81) Designated States (<i>national</i>): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, YU, ZA, ZM, ZW.</p> <p>(84) Designated States (<i>regional</i>): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published:
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(54) Title: NOVEL PHENOLIC RESINS

(57) Abstract: The invention herein disclosed comprises the use of oxazolidines, nitroalcohols, nitroamines, aminonitroalcohols, imines, hexahydropyrimidines, nitrones, hydroxylamines, nitro-olefins and nitroacetals to serve as hardeners and/or as catalysts for curing phenolic resins. The hardeners and catalysts described in the invention can be applied in any application where phenolic resins are used, including but not limited to adhesives, molding, coatings, pultrusion, prepregs, electronics, composites, fire resistant, and flame-retardant end uses.